WA-CD – Protocol for Remote Control of charging Device

The WA-CD charging device can be controlled remotely inside a Control Automation Network/Network. The communication is established via Ethernet on the TCP/IP Layer using a socket connection. Please use only latest firmware on WA-CD to ensure compatibility.

IP-Protocol: IPV4	TCP/IP xxx.xxx.xxx.xxx	Port: 5001

Standard IP: 192.168.0.100

The charging device can be controlled via remote control client. By entering the parameters above and checking the „LF", you can connect with the device. Once a connection has been established, the WA-CD can receive Set- and Get-Commands. The encryption is as follows:

The WA-CD acts as a server, who receives requests form a client: the control system unit. There are two types of commands: **Set** and **Get**. For all commands, the exchanged data is embedded inside an ASCII-String. Commands are interpreted by the receiver and for **every** received String, an answer is sent back to the Client. Every ASCII-String - requests and answers - is terminated by an ASCII line feed ("<LF>" = 0x0A = 10).

Command	Server answer	Meaning / LED code
Bay commands, X is a bay related number from 1 to 4		
?Get_bayX	bayX: IDLE	Solid white
	bayX: TEST	Solid red
	bayX: CHARGE n%	Blinking green / expected state of charge (in percent) [SOC refresh is 4min]
	bayX: FINISH	Solid green
	bayX: ERROR	Flashing red
?Set_bayX=pause	charging on bayX is paused!	Flashing lime green

?Set_bayX=continue	charging on bayX is continued!	Blinking green
Network commands		
?Set_IP=xxx.xxx.xxx.xxx	IP set to: xxx.xxx.xxx.xxx	Set User IP: Example: Set IP to: 192.168.0.101: „?Set_IP=192.168.000.101" Restart WA-CD to activate new IP
?Set_GW=xxx.xxx.xxx.xxx	Gateway set to: xxx.xxx.xxx.xxx	Set Gateway for VLans: Example: Set Gateway to: 192.168.0.254: „?Set_GW=192.168.000.254" Restart WA-CD to activate new Gateway
?Set_SM=xxx.xxx.xxx.xxx	Subnet set to: xxx.xxx.xxx.xxx	Set Subnet Mask: Example: Set Subnet Mask to: 255.255.0.0: „?Set_SM=255.255.000.000" Restart WA-CD to activate new Subnet Mask
Global commands		
?Get_FW	V 2.1.3	Firmware Version (Bootloader, ChgAlgo, BugFix/Feature)

The following summary again covers the basic structure for Set- and Get-Commands. Additionally, examples are given for Set- and Get-Commands.

Set-Command (example):

Global   "?Set_IP=value<LF>"

Charging bay 1 related   "?Set_bay1=value<LF>"

Get-Command:

Global   "?Get_FW<LF>"

Charging bay2 related   "?Get_bay2<LF>"

Example

Command: "?Get_bay1<LF>"	Answer: "bay1: IDLE>"

For Get-Commands, only single information can be requested in a single command (in one ASCII String). For continuously data, the data must be polled form the Client side.

Error Code:

Wrong command: ERROR: Command has wrong key!

Wrong Request: ERROR: Request has wrong key!

Wrong IP address: ERROR: This IP is not allowed!

Wrong Gateway: ERROR: This GW is not allowed!

Wrong subnet mask: ERROR: This SM is not allowed!

Pause, if bay isn't charging: ERROR: this bay isn't charging!

Continue, if bay isn't paused: ERROR: this bay isn't pausing!